



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS,
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,250	12/15/2003	Robert F. Mackness	7784-000518/DVA	6434

27572 7590 06/24/2004

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

DINH, TIEN QUANG

ART UNIT PAPER NUMBER

3644

DATE MAILED: 06/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/736,250

Applicant(s)

MACKNESS, ROBERT F. Ch

Examiner

Tien Dinh

Art Unit

3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30 is/are allowed.
- 6) ☒ Claim(s) 1-18 and 26-29 is/are rejected.
- 7) ☒ Claim(s) 19-25 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>14/1/04</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9, 11-18, 26, 27, 28, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bateman in view of Lowe et al, Kokubu, Oudet et al or Turner, Riesenber et al, Wade, and Nysen.

Bateman discloses a method of monitoring the landing gear system that has a tire pressure detection means but is silent on the radio frequency wireless hubcap transceiver, RF signals to communicate with other elements, wheel speed sensors, and permanent magnet generator on the hubcap to generate current to power the hubcap transceiver and other elements. Bateman is also silent on mounting said above parts "on" the hubcap and wireless sending the information so as to map each wheels on the landing gear system. However, Lowe et al discloses the use of a wireless (RF) hubcap transceiver to transmit the operations data of tires (to a distant transceiver) and as a way (via RF) to communicate with other electrical elements is well known in the art. Furthermore, Kokubu discloses the use of permanent magnet generators that generate current and a power supply (battery 14) to power electrical devices are well known in the art. Please also note that Kokubu discloses electrical parts being mounted on a hubcap are well known in the art. Also, Kokubu uses transceivers to broadcast info (see column 3) to a distant transceiver are well known in the art. Oudet et al or Turner also discloses that wheel

Art Unit: 3644

speed sensors that have magnets on the spinning rod and wheel speed sensors mounted on supporting structure are well known in the art. Riesenberget al teaches that part of a wheel speed element 21 mounted on a hubcap is well known in the art. Wade discloses that the use of mapping of wheel transceivers on the landing gear is well known in the art and Nysen discloses that to wirelessly send information to identify each individual part (mapping) are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used wheel speed sensors, wireless (RF) hubcap transceivers and wireless communication systems using RF, and a permanent magnet generators with power supply (battery) and mount the wheel speed sensors, wireless (RF) hubcap transceivers, and a permanent magnet generators on the hubcap in Bateman's system as taught by Lowe et al, Kokubu, Oudet et al or Turner, and Riesenberget al to have a self contained, self-powered system that monitors the operations of the wheels without wires to save weight.

Furthermore, it would have been obvious to one skilled in the art at the time the invention was made to have used wireless distant transceivers to communicate with the hubcap transceiver to wirelessly map data on positional location of the hubcaps transceiver on the landing gear in Bateman's system as modified by Lowe et al, Kokubu, Oudet et al or Turner, and as taught by Wade and Nysen to know how the wheels on the landing gear are operating and to save weight by not using wires.

Re claims that have storing and displaying information, storing and displaying information in an electronic system is well known in this day and age.

Art Unit: 3644

Re claim 13, the Examiner takes judicial notice that the use of carrier waves to power an electrical device is well known in the art. Please also note that batteries included in an element (such as a sensor) are notoriously well known in the art.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bateman as modified by Lowe et al, Kokubu, Oudet et al or Turner, Riesenbergs et al, Wade, and Nysen as applied to claims 8 and 9 above, and further in view of Trombly and Weimer et al.

Bateman as modified by Lowe et al, Kokubu, Oudet et al or Turner, Riesenbergs et al, Wade and Nysen discloses all claimed parts except for the super-capacitor, voltage regulator, and battery charger. However, Weimer et al teaches that super-capacitors are well known in the art. Trombly discloses the use of a battery charger and voltage regulators are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used super-capacitors and battery chargers with voltage regulators in Bateman's system as modified by Lowe et al, Kokubu, Oudet et al or Turner, Riesenbergs et al, Wade, and Nysen and as taught by Trombly and Weimer et al to have a safer, more powerful and efficient electric system.

Allowable Subject Matter

Claims 19-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 30 is allowed over prior art.

Conclusion

Art Unit: 3644

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Abild et al teaches a screen to monitor the condition of a door system.

Davidson teaches using ID tags.

Please note that Bateman, Lowe et al, Kokubu, Oudet et al, Turner, Riesenbergs et al, and Wade references can be found in the parent application 10/273659.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 703-308-2798. The examiner can normally be reached on 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 703-306-4198. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TD

